

Application No.: 10/681,086
Amendment Dated: July 17, 2006
Reply to Office Action of: March 17, 2006

AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

Claims 1-22 (cancelled).

Claim 23 (currently amended): A process for decoupling production of a target fermentation product from biomass production in a fermentation medium comprising:

(a) providing a recombinantly produced microorganism from the genus Bacillus that has been engineered to contain a polynucleotide sequence which encodes biosynthetic enzymes for [[a]] said target fermentation product, ~~the maximal production of the target fermentation product being dependent on an unlimited supply of a target fermentation product substrate;~~ and

(b) introducing a mutation causing a biotin [[an]] auxotrophy into the microorganism to control biomass production and which does not compromise the ability of the microorganism to produce said target fermentation product, and by limiting the concentration of a substrate complementing the auxotrophy in the fermentation medium

(c) supplying the medium with an unlimited amount of substrates required for the production of said target fermentation product and with a limited amount of biotin complementing the auxotrophy;

wherein said target fermentation product is selected from the group consisting of riboflavin, pantothenic acid, thiamin, folic acid, and pyridoxine.

Claim 24 (currently amended): A process according to claim 23 wherein step (b) comprises introducing a polynucleotide comprising a deletion-insertion mutation

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into the genome of the microorganism to disrupt the microorganism's ability to produce biotin a compound required for biomass production.

Claim 25 (original): A process according to claim 24 wherein the polynucleotide comprises deletion-insertion mutations within a *bioFDB* gene cassette.

Claim 26 (original): A process according to claim 23 wherein the introducing step comprises transforming the microorganism with a polynucleotide sequence comprising a *bioFDB* deletion-insertion mutation.

Claim 27 (original): A process according to claim 26 comprising transforming the microorganism with a polynucleotide sequence comprising SEQ ID NO:1.

Claim 28 (original): A process according to claim 27 further comprising selecting for transformation of the microorganism.

Claim 29 (original): A process according to claim 28 wherein selecting for the transformation comprises selecting for antibiotic resistance.

Claim 30 (original): A process according to claim 29 wherein selecting for the transformation comprises selecting for neomycin resistance.

Claim 31 (original): A process according to claim 23 wherein the target fermentation product is riboflavin.

Claim 32 (original): A production microorganism made by the process of claim 23.

Claims 33-40 (cancelled).